

IN THE CLAIMS

All amendments, new claims and/or cancellations set forth below are without prejudice or disclaimer.

Claims 1-36 (canceled).

Claim 37 (Currently amended). A host cell infected, transfected or induced with ~~the~~ a recombinant vector ~~according to any of claims 1-33~~ that comprises at least one nucleic acid sequence encoding B7, ICAM-1 and LFA-3, wherein the vector permits expression of nucleic acid sequences in the host cell.

Claims 38-88 (canceled).

Claim 89. (Currently amended) A method of treatment or prevention of disease in an individual comprising:

- (a) activating a T lymphocyte by exposing the T lymphocyte in vitro to a host cell according to claim 37 ~~alone or in combination with a target antigen or immunological epitope thereof;~~
- (b) administering the activated T lymphocyte to an individual ~~alone, or in combination with the target antigen~~ in an amount sufficient to enhance an immune response.

Claim 90. (original) The method according to claim 89 wherein the T lymphocytes are autologous with the individual.

Claim 91. (Currently amended) The method according to claim 89, ~~further comprising the administration of a cytokine, chemokine, flt-3l or combination thereof~~ wherein during the activating the T-lymphocyte is exposed to a cytokine, chemokine or flt 3l.

Claim 92. (original) The method according to claim 89 wherein the immune response is against the target antigen selected from the group consisting of a tumor specific antigen, tumor associated antigen, tissue-specific antigen, bacterial antigen, viral antigen, yeast antigen, fungal antigen, protozoan antigen, and parasite antigen.

Claim 93. (original) The method according to claim 89 wherein the immune response prevents or treats a disease caused by a cell or organism selected from the group consisting of viruses, bacteria, protozoans, parasites, premalignant cells and tumor cells.

Claims 94-106. (canceled).

Claim 107. (New) The host cell according to claim 37, wherein the host cell comprises nucleic acid sequences encoding a target antigen.

Claim 108. (New) The host cell according to claim 107, wherein target antigen is selected from the group consisting of a tumor specific antigen, tumor associated antigen, tissue-specific antigen, bacterial antigen, viral antigen, yeast antigen, fungal antigen, protozoan antigen, a parasite antigen and a mitogen.

Claim 109. (New) The host cell according to claim 108, wherein the antigen is a bacterial antigen derived from a bacterium selected from the group consisting of Chlamydia, Mycobacteria, Legionella, Meningioccus, Group A Streptococcus, *Hemophilus influenzae*, Salmonella, and Listeria.

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Claim 110. (New) The host cell according to claim 108, wherein the antigen is a viral antigen derived from a virus selected from the group consisting of Lentivirus, Herpes virus, Hepatitis virus, Orthomyxovirus and Papillomavirus.

Claim 111. (New) The host cell according to claim 110, wherein the viral antigen is a Lentiviral antigen.


Claim 112. (New) The host cell according to claim 111, wherein the Lentiviral antigen is a HIV-1 antigen or an HIV-2 antigen.

Claim 113. (New) The host cell according to claim 110, wherein the viral antigen is a Herpes virus antigen.

Claim 114. (New) The host cell according to claim 113, wherein the Herpes viral antigen is an HSV antigen or a CMV antigen.

Claim 115. (New) The host cell according to claim 110, wherein the viral antigen is a Hepatitis antigen.

Claim 116. (New) The host cell according to claim 115, wherein the Hepatitis antigen is selected from the group consisting of a Hepatitis A antigen, Hepatitis B antigen, Hepatitis C antigen, Hepatitis D antigen and a Hepatitis E antigen.

 Claim 117. (New) The host cell according to claim 110, wherein the viral antigen is an orthomyxovirus antigen.

Claim 118. (New) The host cell according to claim 117, wherein the orthomyxovirus antigen is an influenza antigen.

Claim 119. (New) The host cell according to claim 108, wherein the antigen is a tumor associated antigen, a tumor specific antigen or a tissue-specific antigen.

Claim 120. (New) The host cell according to claim 119, wherein the antigen is selected from the group consisting of CEA, MART-1, MAGE-1, MAGE-3, GP-100,

MUC-1, MUC-2, pointed mutated ras oncogene, normal or point mutated p53, overexpressed p53, CA-125, PSA, C-erb/B2, BRCA I, BRCA II, PSMA, tyrosinase, TRP-1, TRP-2, NY-ESO-1, TAG72, KSA, HER-2/neu, bcr-abl, pax3-fkhr, ews-fli-1, modified TAAs, splice variants of TAAs, functional epitopes and epitope agonists thereof.

Claim 121. (New) The host cell according to claim 120, wherein the antigen is CEA (6D) having aspartic acid at amino acid position 576.

Claim 122. (New) The host cell according to claim 120, wherein the antigen is a is PSA and PSMA.

Claim 123. (New) The host cell according to claim 120, wherein the antigen is MUC-1 encoded by a truncated MUC-1 gene having of a signal sequence, ten copies of a tandem repeat sequence, and a 3' coding sequence.

Claim 124. (New) The host cell according to claim 108, wherein the antigen is a is a yeast or fungal antigen derived from a yeast or fungus selected from the group consisting of Aspergillus, Nocardia, Histoplasmosis, Candida, and Cryptosporidia.

Claim 125. (New) The host cell according to claim 108, wherein the antigen is a

parasitic antigen derived from a *Plasmodium species*, *Toxoplasma gondii*,
Pneumocystis carinii, *Trypanosoma species*, or *Leishmania species*.

Claim 126. (New) The host cell according to claim 37, wherein the vector further comprises a selectable marker.

Claim 127. (New) The host cell according to claim 126, wherein the selectable marker is selected from the group consisting of *lacZ* gene, thymidine kinase, *gpt*, GUS, and a vaccinia K1L host range gene.

Claim 128. (New) The host cell according to claim 37, wherein the vector further comprises at least one nucleic acid sequence encoding one or more of a cytokine, chemokine or flt-3l.

Claim 129. (New) The method according to claim 89, wherein the host cell further comprises at least one nucleic acid sequence encoding a target antigen.

Claim 130. (New) The method according to claim 89, wherein during the activating the T-lymphocyte is exposed to a target antigen.

Claim 131. (New) The method according to claim 89, wherein the host cell further comprises at least one nucleic acid sequence encoding one or more of a cytokine, chemokine or flt-3l.

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